ARNOLD T. MOSBERG

Areas of Specialization:
Toxicology, Inhalation Toxicology, and Physiology
Social Security Number [redacted]
Address: 7989 Peak Road, Clemmons, North Carolina

EDUCATION

B.S. (Aeronautical and Astronautical Engineering)
1969 - The Ohio State University

M.S. (Biomedical Engineering and Physiology)
1973 - The Ohio State University

Ph.D. (Biomedical Engineering and Physiology)
1978 - The Ohio State University

DABT Diplomate American Board of Toxicology 1987

EMPLOYMENT HISTORY

R. J. Reynolds Tobacco Co., Winston-Salem, North Carolina.

Master R&D Toxicologist, Applied Toxicology Group, December 1988 to the present

Senior Staff R&D Toxicologist, Applied Toxicology Group, December 1985 to December 1988

Battelle's Columbus Division, Columbus, Ohio.

Associate Section Manager, Toxicology and Health Sciences, October 1985 to December 1985.

Senior Research Scientist, Toxicology and Health Sciences Section, October 1984 to October 1985; Principal Research Scientist, Health and Environmental Sciences Section, May 1980 to October 1984; Research Scientist, Bioengineering/Health Sciences Section, 1977 to May 1980.

The Ohio State University, Columbus, Ohio.

Adjunct Assistant Professor, Department of Medical Pharmacology, August 1980 to June 1985; Research Associate, Departments of Medicine and Aeronautical and Astronautical Engineering, 1973 to 1977.

General Electric Company, Evandale, Ohio.

Aeronautical and Astronautical Engineering, Aircraft Engine Group, 1969 to 1971.

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RELEVANT EXPERIENCE IN TOXICOLOGY

R.J. Reynolds Tobacco Company

Group leader for physiology on more than seven nose-only inhalation toxicology studies designed to evaluate company products.

Study monitor on 17 different extramural toxicology or toxicology-related studies. Major contributions include study design, inhalation system evaluation, study-monitoring and report preparation.

Battelle Columbus Laboratories

Manager of Battelle Columbus Laboratories' Inhalation Toxicology Facility and senior scientific advisor for inhalation studies for the period from 1983 to December 1985.

National Toxicology Program approved study director for inhalation toxicology projects.

Principal investigator and proposal author of a 36-month, Government-funded study to quantify the sequelae of pathophysiology results from acute organophosphate exposure. Pulmonary, cardiovascular, and neuromuscular physiology evaluations as well as routine toxicology endpoints were evaluated in three species exposed by inhalation, intravenous and subcutaneous infusion.

Principal investigator and aerosol physicist for numerous industrially-sponsored inhalation toxicology programs.

Pulmonary physiologist for an 18-month Government-funded program to establish exposure standards for airborne fibrous glass.

Pulmonary physiologist for a large industrial program designed to evaluate the potential toxicity of flyash in normal and compromised populations.

PROFESSIONAL MEMBERSHIPS

REDACTED

RESEARCH INTERESTS

Toxicology, Inhalation Toxicology
Cardiovascular Physiology
Respiratory Physiology
Fluid Dynamics
Aerosol Physics
Biomedical device Design

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PUBLICATIONS AND PRESENTATIONS

Mosberg, A.T., "An in vitro study of transendothelial albumin transport in the presence of a sinusoidally oscillatory flow", Masters Thesis, Ohio State University (1973).

Nerem, R.M., Mosberg, A.T., and Schwerin, W.D., "Transendothelial transport of 131-I albumin", Journal of Biorheology 12: 81-87 (1975).

Nerem, R.M., Mosberg, A.T., Polsley, J.S., and Carey, W.E., "Transport of 131-I albumin between blood and the arterial wall", 77th National Meeting of the American Institute of Chemical Engineers, June 2-5, Pittsburgh, PA (1974).

Mosberg, A.T., and Nerem, R.M., "An in vitro study of transendothelial albumin transport in the presence of a sinusoidally oscillating flow", 27th Annual Conference on Engineering in Medicine and Biology, October 6-10, Philadelphia, PA (1974).

Nerem, R.A., Mosberg, A.T., and Schwerin, W.D., "Transendothelial transport of 131-I albumin", Second International Congress of Biorheology at the Weizman Institute of Science, December 29-January 7, Rehabot, Israel (1975).

Nerem, R.M., Schwerin, W.D., and Mosberg, A.T., "Blood-arterial wall transport of 131-I albumin in the presence of whole body vibration", 28th Annual Conference on Engineering in Medicine and Biology, September 20-24, New Orleans, LA (1975).

Mosberg, A.T., Nerem, R.M., and Donnerberg, R.L., "Velocity profiles and frequency characteristics of airflow in canine large airways", Second International Conference on Lung Sounds, September 29-30, Cincinnati, OH (1976).

Mosberg, A.T., "An in vitro study of the velocity patterns in the canine upper airways", Doctoral dissertation, Ohio State University (1978).

Mosberg, A.T., Nerem, R.M., and Donnerberg, R.L., "In vivo measurements of turbulence decay during inspiration", 31st meeting of the American Physiological Society, November 19-21, San Diego, CA (1978).

Mosberg, A.T., Nerem, R.M., and Donnerberg, R.L., "An in vivo study of velocity patterns in the canine trachea", American Society of Mechanical Engineering Conference, December 11-13, San Francisco, CA (1978).

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Hughes, K.E., Mosberg, A.T., DeVore, D. P., Fink, D. J., and Hutson, T. B., "Space processing of collagen biomaterials", 33rd Annual Conference on Engineering in Medicine and Biology, September 30-October 3, Washington, DC (1980).

Mosberg, A.T., Mays, D., Riggin, R., Shure, M., Mumford, J., and Fisher, G., "Chemical and Physical Properties of Vapor-Phase Nitropyrene-Coated Coal Flyash", Sixth International Symposium on Polynuclear Aromatic Hydrocarbons, October 27-29, Columbus, Ohio (1981).

Mosberg, A.T., Fisher, G., Mays, D., Riggin, R., Shure, M., and Mumford, J., "Properties of 3H-labeled 1-nitropyrene deposited onto coal flyash", Polynuclear Aromatic Hydrocarbons: Physical and Biological Chemistry, Sixth International Symposium, edited by M. Coke, A. J. Dennis, G. L. Fisher, Battelle Press, Columbus - Richland/Springer-Verlag, New York - Heidelberg - Berlin, pp. 551-566 (1982).

Mosberg, A.T., Hassler, C.R., and Franz, D., "Toxicity of soman: standardization of animal models", U.S. AMRDC Third Annual Biosciences Review, June 1-4, Aberdeen Proving Ground, Aberdeen, Maryland (1983).

Mosberg, A.T., Hassler, C.R., and Franz, D., "Sequelae of soman intoxication in specific animal models", Symposium on Respiratory Care of Chemical Casualties, November 28-30, McLean, Virginia (1983).

Mosberg, A.T., Fisher, G.L., and Hassler, C.R., "Cardiopulmonary physiology evaluation and inhalation exposure", Battelle International Inhalation Workshop, September 27-29, Seattle, Washington (1984).

Mosberg, A.T., Prentice, B.A., and Fisher, G.L., "Specialized approaches to aerosol generation and monitoring for inhalation toxicology", Battelle International Inhalation Workshop, September 27-29, Seattle, Washington (1984).

Mosberg, A.T., "Invited guest at 17th International Symposium for Prophylaxis and Treatment of Chemical Poisoning", April 22-25, Stockholm, Sweden (1985).

Mosberg, A.T., and Prentice, B.A., "Large animal nose-only exposure system for Soman toxicity studies", Fifth Annual Chemical Defense Bioscience Review, May 29-31, Johns Hopkins University, Columbia, Maryland (1985).

Mosberg, A.T., Hassler, C.R., Moutvic, R., Vinci, T., and Quebbeman, H., "A comparison of the course of pathophysiology in the dog and monkey following acute Soman intoxication", Fifth Annual Chemical Defense Bioscience Review, May 29-31, Johns Hopkins University, Columbia, Maryland (1985).

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Mosberg, A.T., Hassler, C.R., Moutvic, R., Vinci, T., and Quebbeman, H., "Sequelae of pathophysiology in dogs as result of Soman intoxication", Fifth Annual Chemical Defense Bioscience Review, May 29-31, Johns Hopkins University, Columbia, Maryland (1985).

Mosberg, A.T., Prentice, B.A., and Fisher, G.L., "Performance of nose-only exposure system for the evaluation of organophosphate toxicity", 17th Aerosol Technology Meeting, August 26-28, Battelle Columbus Division, Columbus, Ohio (1985).

Mosberg, A.T., McNeil, D., Prentice, B.A., and Fisher, G.L., "Exotic aerosol generation methods for inhalation toxicology evaluations", 17th Aerosol Technology Meeting, August 26-28, Battelle Columbus Division, Columbus, Ohio (1985).

Mosberg, A.T., Hassler, C.R., Hamlin, R.L., Moutvic, R., Vinci, T., and Quebbeman, H., "Comparison of respiratory compromise in dogs, monkeys, and cats following acute inhalation of organophosphates", Symposium on Respiratory Care of Chemical Casualties, November 27-29, McLean, Virginia (1985).

Moorman, W.J., Mitchell, R., Mosberg, A.T., and Donofrio, D., "A chronic inhalation toxicology study with fibrous glass in rats and monkeys", Sixth International Symposium on Inhaled Particles, sponsored by the British Occupational Hygiene Society, September 2-6, University of Cambridge, Cambridge, England (1985).

Coggins, C.R.E., Burger, G.T., Ayres, P.H., and Mosberg, A.T., "Histopathological changes in rats exposed to carbon monoxide", Presented as a poster at the 26th Annual Meeting of the Society of Toxicology, (The Toxicologist, 7:754) February 23-27, Washington, DC.(1987).

Ayres, P.H., Coggins, C.R.E., and Mosberg, A.T., "Cardiomegaly in rats after a 14-day exposure to sublethal concentrations of carbon monoxide", Presented as a poster at the 26th Annual Meeting of the Society of Toxicology, (The Toxicologist, 7:753) February 23-27, Washington, DC. (1987), R&DM No 45, Submitted March 1987.

Mosberg, A.T., Ayres, P.H., and Coggins, C.R.E., "Pulmonary function effects in rats exposed to sublethal concentrations of carbon monoxide", Presented as a poster at the 26th Annual Meeting of the Society of Toxicology, (The Toxicologist, 7:752) February 23-27, Washington, DC. (1987), R&DM No 46, Submitted March 1987.

Mosberg, A.T., Coggins, C.R.E., and Ayres, P.H., "Absorption and elimination kinetics in rats exposed to sublethal concentrations of carbon monoxide", Presented as a poster at the 26th Annual Meeting of the Society of Toxicology, (The Toxicologist, 7:751) February 23-27, Washington, DC. (1987), R&DM No 47, Submitted March 1987.

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Fisher, G.L., Chin, A.E., Prentice, B.A., Fentiman, A.F., Mosberg, A.T., Staubus, A.E., and Barrett, W.E., (1986) "Pharmacokinetics and Metabolism of Inhaled Radiolabeled Tixocortol Pivalate", 6th International Congress for Aerosols in Medicine, October 2-5, Vichy, France. (1986).

Fisher, G.L., Chin, A.E., Prentice, B.A., Fentiman, A.F., Mosberg, A.T., Staubus, A.E., and Barrett, W.E., (1986) "Pharmacokinetics and Metabolism of Inhaled Radiolabeled Tixocortol Pivalate", Proceedings of the 6th International Congress for Aerosols in Medicine, Vichy, France. (1986).

Coggins, C.R.E., Burger, G.T., Ayres, P.H., and Mosberg, A.T., "Histopathological changes in rats exposed to carbon monoxide." Presented as a poster at the Sixth Annual Symposium of the Society of Toxicologic Pathologists, Philadelphia, PA, 1987, R&DM No 48, Submitted 18 March 1987.

Hayes, A.W., Coggins, C.R.E., Ayres, P.H., Burger, G.T., and Mosberg, A.T., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burn or only heated tobacco" 1. Cigarettes, Experimental design., 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1006) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

James, R.A., Avalos, J.T., Mosberg, A.T., Coggins, C.R.E., and Ayres, P.H., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burned or only heated tobacco" 2. Nose-only inhalation system; smoke chemistry, 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1007) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

Coggins, C.R.E., Mosberg, A.T., Burger, G.T., Hayes, A.W., and Ayres, P.H., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burned or only heated tobacco" 3. Blood composition, 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1008) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

Mosberg, A.T., Coggins, C.R.E., Burger, G.T., Hayes, A.W., Phelps, R.L., Reynolds, S.A., and Ayres, P.H., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burned or only heated tobacco" 4. Minute Ventilation, 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1009) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

Ayres, P.H., Coggins, C.R.E., Burger, G.T., Hayes, A.W., Gerald, L., and Mosberg, A.T., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burned or only heated tobacco" 5. Body weight change, organ weights, 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1010) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

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Burger, G.T., Coggins, C.R.E., Hayes, A.W., Ayres, P.H., Mosberg, A.T., and Sagartz, J.W., "Ninety-day inhalation study in rats, comparing smoke from cigarettes which burned or only heated tobacco" 6. Histopathology, 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1011) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

Gerald, L., Ayres, P.H., Mosberg, A.T., Hayes, A.W., Burger, G.T., Sagartz J.W., and Coggins, C.R.E., "Extended inhalation exposures of rats to cigarette smoke" 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1014) Washington, DC. 1988. Also presented at the 1988 Annual RJR Nabisco Science Forum.

Greenspan, B.J., Moss, O.R., Wehner, A.P., Renne, R.A., Ragan, H.A., Westerberg, R.B., and Wright, C.W., Battelle Northwest Laboratories, Richland, WA., Deskin, R., Hayes, A.W., Burger, G.T., and Mosberg, A.T., R.J. Reynolds Tobacco Co., Winston-Salem, NC. "Inhalation studies of Humectant Aerosols in rats" 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1015) Washington, DC. 1988.

Renne, R.A., Wehner, A.P., Greenspan, B.J., Moss, O.R., Ragan, H.A., Westerberg., R.B., Wright, C.W., and DeFord, H.S., Battelle Northwest Labs, Richland, WA., Burger, G.T., Hayes, A.W., and Mosberg, A.T., R.J. Reynolds Tobacco Co., Winston-Salem, NC. "Subchronic Inhalation study in Hamsters, comparing smoke from a cigarette which burns and one that only heats tobacco" 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1013) Washington, DC. 1988.

Wehner, A.P., Renne, R.A., Greenspan B.J., and Moss, O.R., Battelle Northwest Labs, Richland, WA., Hayes, A.W., Burger, G.T., and Mosberg, A.T., R.J. Reynolds Tobacco Co., Winston-Salem, NC. "Subchronic Inhalation study in rats, comparing smoke from a cigarette which burns and one that only heats tobacco" 27th Annual Meeting of the Society of Toxicology (The Toxicologist, 8:1012) Washington, DC. 1988.

Coggins, C.R.E., Ayres, P.H., Mosberg, A.T., R.J. Reynolds Tobacco Co, Winston-Salem, NC., Chen, C.H., Alpha Biomedical Labs, Seattle, WA., "The use of a lipid profile in a 90-day inhalation experiment in rats, comparing smoke from cigarettes which burned or only heated tobacco" Presented at the 28th Annual Meeting of the Society of Toxicology (The Toxicologist, 9:553) Atlanta, GA. 1989.

Mosberg, A.T., Coggins, C.R.E., Ayres, P.H., R.J. Reynolds Tobacco Co, Winston-Salem, NC., and Wehner, A.P., Battelle, Richland, WA., "Relationships between amounts of nicotine presented and inhaled, and resulting plasma concentrations, in 90-day inhalation studies in rats" Presented at the 28th Annual Meeting of the Society of Toxicology (The Toxicologist, 9:555) Atlanta, GA. 1989.

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Coggins, C.R.E.; Ayres, P.H.; Mosberg, A.T.; Burger, G.T.; Sagartz, J.W. and Hayes, A.W. (1989). "Comparative inhalation study in rats, using a second prototype of a cigarette that heats rather than burns tobacco." Inhalation Toxicology 1 : 197-226.

Mosberg, A. T., and Hayes, A. W. (1988). Subchronic toxicity testing. In: Principles and Methods of Toxicology. Hayes, A. W.; ed. 2nd edition, Raven Press, NY.

Coggins, C.R.E.; Ayres, P.H.; Mosberg, A.T.; Sagartz, J.W.; Burger, G.T. and Hayes, A.W. (1989) "Ninety-day inhalation study in rats, comparing smoke from cigarettes that heat tobacco with those that burn tobacco." Fundamental and Applied Toxicology 13 (in press).

Ayres, P.H.; Mosberg, A.T.; Burger, G.T.; Hayes, A.W.; Sagartz, J.W. and Coggins, C.R.E. "Nose-only exposure of rats to carbon monoxide." Inhalation Toxicology (in press).

Burger, G.T.; Renne, R.A.; Sagartz, J.W.; Ayres, P.H.; Coggins, C.R.E.; Mosberg, A.T. and Hayes, A.W. "Chemically induced morphological changes in the respiratory tract: physiologic adaptation or a sign of toxicity ?". Toxicology and Applied Pharmacology (in press).

Wehner, A.P.; Renne, R.A.; Greenspan, B.J.; DeFord, H.S.; Ragan, H.A.; Westerberg, R.B.; Wright, C.W.; Buschbom, R.A.; Burger, G.T.; Hayes, A.W.; Coggins, C.R.E. and Mosberg, A.T. "Comparative subchronic inhalation bioassay in hamsters of a cigarette which only heats tobacco". Inhalation Toxicology (in preparation).

Wehner, A.P., Renne, R.R., Greenspan, B.J., DeFord, H.S., Ragan, H.A., Westerberg, R.B., Wright, C.L., Buschbom, R.L., Battelle Pacific Northwest Labs, Richland, WA., and Hayes, A.W., Burger, G.T., Mosberg, A.T., R.J. Reynolds Tobacco Co., Winston-Salem, NC., "Subchronic and repeated dose glycerol inhalation bioassays in rats" Fundamental and Applied Toxicology (in preparation).

Wehner, A.P., Renne, R.R., Greenspan, B.J., DeFord, H.S., Ragan, H.A., Westerberg, R.B., Wright, C.L., Buschbom, R.L., Battelle Pacific Northwest Labs, Richland, WA., and Hayes, A.W., Burger, G.T., Mosberg, A.T., R.J. Reynolds Tobacco Co., Winston-Salem, NC., "Subchronic inhalation bioassay in rats of a cigarette which heats rather than burns tobacco" Fundamental and Applied Toxicology (in preparation).

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